

REMARKS

Independent claims 26 and 49 have been amended to better define the inventions. Claim 49 has been further amended to describe the pressure drop member having no visible through openings. Support for this change is in Fig. 3, element 115, and in the specification at page 14, line 18 to page 15, line 15. Claims 52 and 55 have been amended to describe the pressure drop member terminating at an apex, as shown in Figs. 1 and 3 and described at page 13, lines 17-23. The claims have also been amended to include the corrections noted by the Examiner at page 2 of the 06/23/2008 Office Action.

An RCE is filed with this Amendment. Entry of this Amendment and reconsideration and withdrawal of the rejections is requested in the view of the changes to the claims and the following remarks.

AMENDED CLAIM 26:

In contrast to amended claim 26, Reid et al., U.S. Patent No. 6,126,798 (Reid), discloses an apparatus where fluid is pumped directly onto the anode material 206. In Reid et al. the fluid enters through inlets 220, 228, or 236. Each of these inlets is also vertically below the top level of the anode material.

The Examiner is correct (at page 6 of the 06/23/2008 Office Action) that each of the inlets in Reid et al. has a check valve. However, the check valves simply prevent back flow. In other words, the check valves act to keep the fluid flowing only in the direction of the arrows in Fig. 2 of Reid et al. This is the definition of "check valve" in all dictionaries.

More importantly, Reid et al. expressly states that the check valves act to prevent backflow:

"Outlet 224 is fitted with a check valve to prevent backflow of plating solution and particulates from anode cup 202 into jet 200." Col. 6, lines 50-52.

"To prevent inadvertent backflow of plating solution and particulates from anode cup 202 into jet 200, inlet 220 is fitted with a check valve which allows the plating solution only to flow from jet 200 to anode cup 202 and not vice versa." Col. 6, lines 41-45.

The basis of the reasoning for the rejection of claim 26, at pages 6-7 of the Office Action, consequently is directly contrary to teachings of Reid et al. Nothing in Reid et al. suggests that the inlets can be controlled or reduced to zero flow—to render Reid et al. capable of providing processing fluid into the electrode housing from a position vertically above the at least one electrode, and preventing the processing fluid entering the electrode housing from directly impinging on the electrode, as in claim 26. Rather, in Reid et al., the check valves simply maintain all flow in the forward direction shown by the arrows in Fig. 2 of Reid et al.

If the check valves in Reid et al. were replaced by on/off valves, then the reasoning at the bottom of pages 6-7 might be sustainable. However, Reid et al. must be taken only for what it fairly discloses. Substitution of on/off valves in place of the check valves in Reid et al., goes against the teachings of Reid et al. (for example by allowing particulates to enter into the jet 200). It would also result in a completely different type of apparatus. In addition, there is no motivation anywhere in the prior art for this type of redesign of Reid et al. Indeed, replacing the check valves in Reid et al., to create an apparatus capable of

meeting the limitations of claim 26, can only be done in view of the disclosure of the Application. Such hindsight reasoning is an improper basis for rejections under sections 102 and 103.

Claim 26 is accordingly patentable over Reid et al. at least because Reid et al. does not reasonably suggest a flow path providing processing fluid into the electrode housing from a position vertically above the electrode, and preventing the processing fluid entering the electrode housing from directly impinging on the electrode.

AMENDED CLAIM 49:

Amended Claim 49 describes a pressure drop member which is generally conically-shaped and has no visible through openings. This change to claim 49 is intended to further distinguish over Reid et al., which discloses a membrane having a large central opening to allow the jet pipe 200 to pass through the membrane. The characteristics of the claimed pressure drop member are described at pages 13-15 of the Application. It may be a fluid permeable membrane, an ion permeable membrane, or similar materials as described in the Application. None of these materials have visible through openings. Any visible opening would of course defeat the purpose of a pressure drop member at the outset.

The description of no visible openings in amended claim 49 is believed to be fully responsive to the section 112 rejection of claim 49 at page 3 of the Office Action, and the claim interpretation issue raised at pages 4-5 of the Office Action. The claimed design does not have a pipe passing through a membrane, as in Reid et al., thus offering various practical advantages. Applicant welcomes any additional helpful suggestions by the

Examiner for claim 49, in the event the Examiner feels that claim 49, as further amended, is not allowable.

CLAIM 93:

Claim 93 describes an electroplating apparatus where substantially all processing fluid movement between the first and second fluid flow regions passes through the pressure drop element. In Reid et al., the same fluid provided to the anode material (via inlets 220, 224 and 236), is also provided into the bath 42A above the membrane 208 via the inlet 200. In Reid et al., fluid also moves upwardly into the bath 42A both through the membrane, and through the inlet 200 – i.e., without passing through the membrane.

Whether Reid et al. could be redesigned without check valves, to provide fluid movement as in claim 93 (as suggested in the Office Action), is not the issue. As set forth above in the discussion of claim 26, Reid et al. expressly teaches away valves allowing reverse flow, or no flow. As a result, claim 93 cannot be properly rejected on a distorted redesign of Reid et al. that conflicts with the actual teachings of Reid et al.

As Reid et al. does not suggest substantially all processing fluid movement between the first and second fluid flow regions passing through the pressure drop element, claim 93 is patentable over Reid et al.

CLAIMS 52 AND 55:

Amended claims 52 and 55 describe a pressure drop member having a conical shape terminating in an apex. The apex is shown in Figs. 1 and 3. Reid et al., on the other hand, has no apex, since the inlet pipe 200 passes through the membrane at the center of the membrane.

In view of the foregoing, the claims are believed to be in condition for allowance, and a Notice of Allowance is requested.

Although the present communication includes amendments to the claims, and a discussion of the prior art, the applicant does not concede here that previously pending claims are not patentable over the prior art. Rather, the claims are changed here in an effort to expedite grant of a patent from this application. Accordingly, any person reviewing the prosecution history of this application, or the prosecution history of any parent or other related application, should not infer that any subject matter supported by the present application has been disclaimed or disavowed.

If the Examiner has any questions or believes a teleconference would expedite prosecution of the present application, please call the undersigned representative at 310-788-3267.

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Respectfully submitted,

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